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Design of Microcontrolled Robot

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DESIGN OF
MICROCONTROLLED
ROBOT

for

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ABSTRACT
OF
THE MICROCONTROLLED ROBOT

This report addresses all major problems in the construction ofthe prototype unit. The report also details all methods of solving the problems during construction. The report concludes that the project is successful and could be useful in a verity of applications.

The problem was to design a robot that can maneuver through a house or office without running into anything. The controller used for this would have to be able to avoid objects; communicate with the user by way of speech and a keypad; and keep track of how far the robot has moved. Finally, the unit must be cost effective.

The methods of solving this problem was to evaluate devices capable of performing the following functions:

- support the frame for hardware
- supply electrical power
- steer the robot
- move the robot
- detect objects
- input information to robot
- measure distance moved
- interface these devices

After evaluating and finding the best device for the job, a plan for connecting them together to make a unit had to be laid out. Finally, the cost of the product had to be considered.

The solution to the problem was to use a microcontroller to read information into it from the external devices. The controller would make decisions on the information input. The controller would then calculate what adjustments were needed and output them to the appropriate devices.